

REMARKS

This application has been reviewed in light of the Office Action dated October 29, 2008. Claims 1-26 are in this application, of which Claims 13-20, 22, 24 and 26 have been withdrawn from consideration as being drawn to a non-elected invention.^{1/} Of the claims under examination, Claims 1, 21, 27 and 28 are in independent form. Claims 1-6 and 12 have been amended. Claims 27 and 28 have been added to provide Applicants with a more complete scope of protection. Favorable reconsideration is requested.

Claim 1 was rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. Although it is not conceded that the rejection is correct or valid, Claim 1 has been amended as suggested by the Examiner in paragraph 3 of the Office Action in an effort to expedite the allowance of this application.

Claim 1 also was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants have amended Claim 1 as deemed necessary to ensure that it conforms fully to the requirements of Section 112, second paragraph, with special attention to the points raised in paragraph 5 of the Office Action. It is believed that the rejection under Section 112, second paragraph, has been obviated, and its withdrawal is therefore requested.

The Office Action states that Claims 1-12, 21, 23, and 25 have been rejected under 35 U.S.C. § 102(b) as being anticipated by European Patent No. 0 982 931

^{1/} Applicant understands that Claim 21 is actually included in the elected invention, as it was so listed in the Restriction Requirement, and is an apparatus claim corresponding to method Claim 1.

(*Berthelot et al.*). Applicants submit that independent Claims 1, 13, 21 together with the claims dependent thereon, are patentably distinct from the cited prior art for at least the following reasons.

Claim 1 recites as follows:

1. A method of forming a compressed transcoded digital image signal from a compressed original digital image signal which comprises digital data organized in blocks, the compression of the original signal comprising at least one step of spatio-frequency transformation of the original signal and a step of coding the data blocks of said transformed signal,

said method using a processor to perform the steps of:

selecting a data block in one of the compressed signals between the compressed transcoded digital image signal and the compressed original digital image signal, said selecting comprising identifying the spatial position of said data block in said one of the compressed signals,

identifying, in the non selected compressed signal, the spatial position of a so-called dual data block which corresponds to the data block selected having regard to a given geometric transformation applied to this block,

decoding the data block belonging to the compressed original signal,

applying the given geometric transformation to the data block thus decoded,

coding the geometrically transformed data block, and

inserting the first data block thus coded in the compressed transcoded image signal at the position of its dual block.

On page 4, the Office Action cited different paragraphs against the different features recited in independent method Claim 1.

The Office Action more particularly quoted paragraphs 64 to 72 of Berthelot along with Figures 5 and 6 against the compression of the original signal in Claim 1 and the selecting step of a data block in one of the compressed signals.

The quoted paragraphs describe in a conventional manner the compression of a digital signal.

More particularly, this compression includes different operations, namely:

breaking down the signal into frequency sub-bands according to a spatio-frequency wavelet transformation to obtain coefficients c_i ;

quantization of all the coefficients c_i of the signal broken down into frequency sub-bands, these coefficients being quantized one by one into quantization symbols q_i (each coefficient c_i of the frequency sub-bands is depicted in a unique fashion by a quantization symbol q_i ; see paragraph 72) by quantization means 3;

coding of the quantization symbols by entropic coding means 4.

Further to these operations, a file compressed data F containing a digital signal S coded is obtained (See paragraph 73). However, nowhere is there seen to be a teaching or suggestion of a data block by data block processing in the quoted paragraphs of Berthelot (or anywhere else in the reference), unlike in Claim 1 wherein different steps are performed on a data block basis.

Neither are paragraphs 64 to 72 (or anywhere else in the reference) seen to teach or suggest any selection of a data block in one of the compressed signals between the compressed transcoded digital image signal and the compressed original digital image signal.

The Office Action then argued that paragraphs 73 to 79 disclose the identifying step, in the other compressed signal (which has been replaced by "in the non

selected compressed signal”), of a so-called dual data block which corresponds to the data block selected having regard to a given geometric transformation applied to this block. However, without conceding the propriety of this allegation, this feature has been amended in Claim 1 to specify that the step of identifying identifies the spatial position of the so-called dual data block. Nothing in paragraphs 73 to 79 (or anywhere else in the reference) teaches or suggests any identifying step of the spatial position of the dual data block in the non selected compressed signal and which corresponds to the data block previously selected having regard to a given geometric transformation applied to this block.

Even if it were to be assumed arguendo that there is a correspondence between a selected data block and one of the frequency sub-bands of Figures 5 and 6, it is not at all clear where the dual data block of one of the frequency sub-bands in the transcoded compressed file F* would be. It also is not seen where is it mentioned or suggested in Berthelot that the spatial position of this dual data block is identified in this transcoded compressed file. If the Examiner disagrees with these assertions, the Examiner is respectfully requested to provide reasoning.

In the quoted paragraphs it is explained that the compressed file F containing the coded digital signal S is transcoded. The first transcoding step is performed by the extraction means 6 which carry out an entropic decoding of the coded signal in order to extract quantization symbols q_i associated with the coefficients of the frequency sub-bands as mentioned in paragraphs 79 and 80. However, this transcoding step is not performed on a data block basis. More particularly, this transcoding step is not performed

on the previously selected data block which, assuming for argument's sake, would be one of the frequency sub-bands depicted in Figures 5 and 6.

Furthermore, in Berthelot, a geometric transformation is then applied by means 7 (see paragraphs 79 and 81) to the symbols q_i previously extracted, each symbol being associated with a coefficient c_i of the frequency sub-bands. This geometric transformation is therefore not applied on a data block basis as in Claim 1. More particularly, this geometric transformation is not applied to a block of symbols q_i .

Neither is Berthelot seen to teach or suggest coding such a geometrically transformed data block, nor any step of inserting this coded data block in the compressed transcoded image signal at the position of its dual block.. This data block by data block processing which is provided for in method of Claim 1 can enable a reduction in the size of the memory used for performing the different steps of the method, in one example embodiment (of course, this example is for illustrative purposes only, and is not intended to limit the scope of the claims).

Nothing in the cited Berthelot reference would teach or suggest the recitations discussed above with respect to Claim 1. Accordingly, that claim is clearly patentable over the reference.

Independent Claim 21 recites features that are similar in many relevant respects to those of Claim 1, and also is therefore believed to be patentable over the reference.

Added independent method Claim 27 specifies that the selecting step of the data block is made in the compressed original digital image signal. Added independent method Claim 28 specifies that the selecting step of the data block is made in the compressed transcoded digital image signal, the identifying step is made in the compressed original digital signal and the coded data block is inserted at the position of the selected block in the compressed transcoded image signal.

For the reasons give above, nothing in the above-mentioned reference would teach or suggest those features. As such, these claims are patentable over the reference as well.

The other rejected claims in this application depend from one or another of the independent claims discussed above and, therefore, are submitted to be patentable over Berthelot for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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